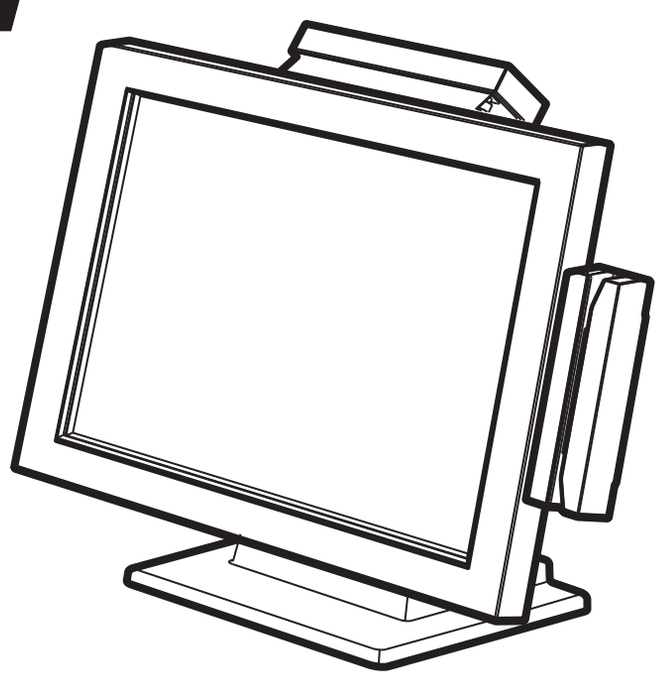
USER MANUAL

VERSION V1.4 DECEMBER 2010

Point-of-Sale Hardware System



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Manual Version 1.4
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Safety

IMPORTANT SAFETY INSTRUCTIONS

1. To disconnect the machine from the electrical power supply, turn off the power switch and remove the power cord plug from the wall socket. The wall socket must be easily accessible and in close proximity to the machine.
2. Read these instructions carefully. Save these instructions for future reference.
3. Follow all warnings and instructions marked on the product.
4. Do not use this product near water.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register or in a built-in installation unless proper ventilation is provided.
7. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
8. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
9. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

CE MARK

This device complies with the requirements of the EEC directive 2004/108/EC with regard to “Electromagnetic compatibility” and 2006/95/EC “Low Voltage Directive”.

FCC

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may cause undesired operation.

CAUTION ON LITHIUM BATTERIES

There is a danger of explosion if the battery is replaced incorrectly. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer’s instructions.

Battery Caution

Risk of explosion if battery is replaced by an incorrectly type.
Dispose of used battery according to the local disposal instructions.

Safety Caution

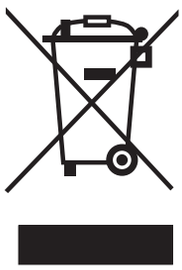
Note: To comply with IEC60950-1 Clause 2.5 (limited power sources, L.P.S) related legislation, peripherals shall be 4.7.3.2 “Materials for fire enclosure” compliant

4.7.3.2 Materials for fire enclosures
For MOVABLE EQUIPMENT having a total mass not exceeding 18kg.the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of V-1 CLASS MATERIAL or shall pass the test of Clause A.2.

For MOVABLE EQUIPMENT having a total mass exceeding 18kg and for all STATIONARY EQUIPMENT, the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of 5VB CLASS MATERIAL or shall pass the test of Clause A.1

LEGISLATION AND WEEE SYMBOL

2002/96/EC Waste Electrical and Electronic Equipment Directive on the treatment, collection, recycling and disposal of electric and electronic devices and their components.



The crossed dust bin symbol on the device means that it should not be disposed of with other household wastes at the end of its working life. Instead, the device should be taken to the waste collection centers for activation of the treatment, collection, recycling and disposal procedure.
To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.

This product should not be mixed with other commercial wastes for disposal.

Revision History

Changes to the original user manual are listed below:

Revision	Description	Date
1.0	• Initial release	2007 August
1.1	• Cover page update • System View update • System Installation update • System Disassembly update • Specification update	2007 December
1.2	• Performance model info. added	2008 January
1.3	• B68 motherboard Added • B78 motherboard updated to v2.2 • B98 motherboard Added • Format Change • Jumper Setting updated	2009 December
1.4	• SSD Card Replacement Added • C48 motherboard Added	2010 December

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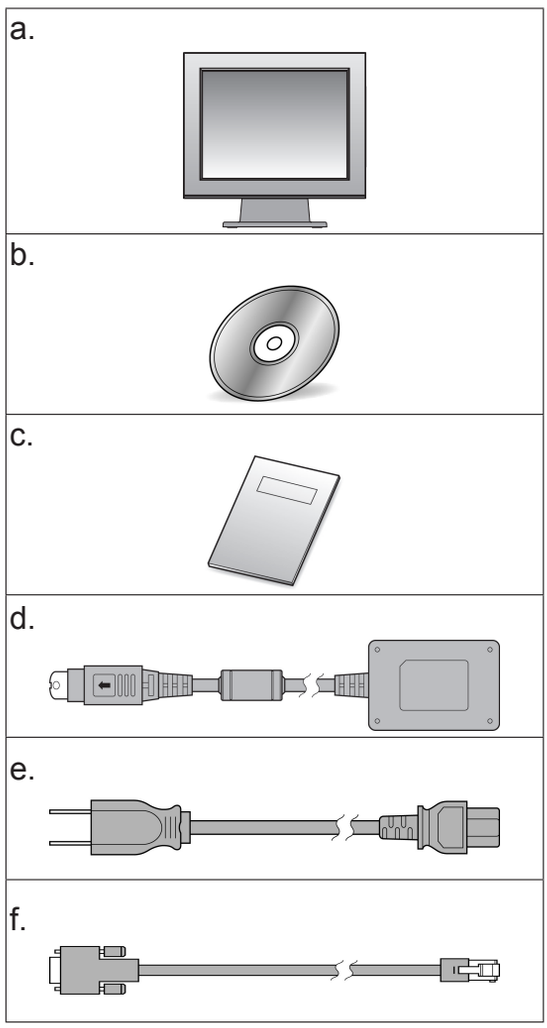
1. Packing List

1-1. Standard Accessories

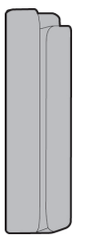
a. System (with stand)
b. Driver bank
c. User guide
d. Power adapter
e. Power cord
f. RJ45-DB9 cable (x2)



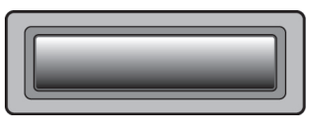
1-2. Optional Accessories

a. Metal MSR
b. Metal VFD
c. Wall-mount Kit
d. SSD module
e. WLAN Card (with internal antenna)

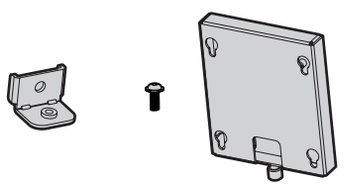
a.



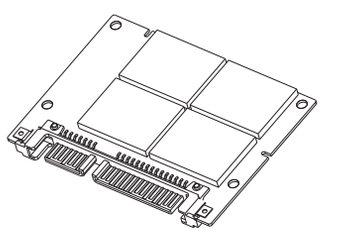
b.



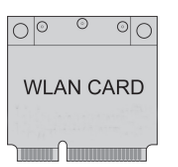
c.



d.

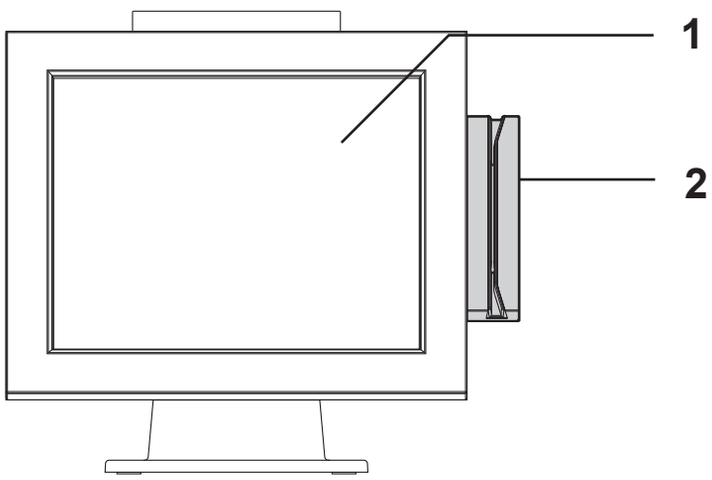


e.

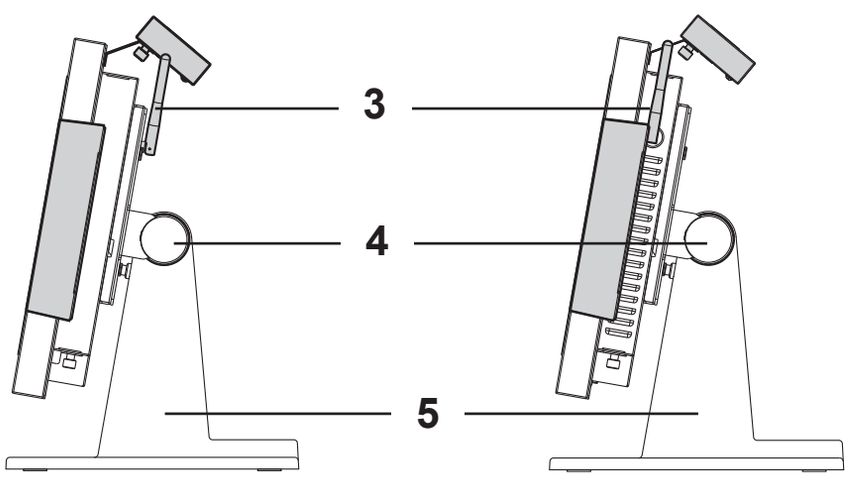


2. System View

2-1. Front View



2-2. Side View

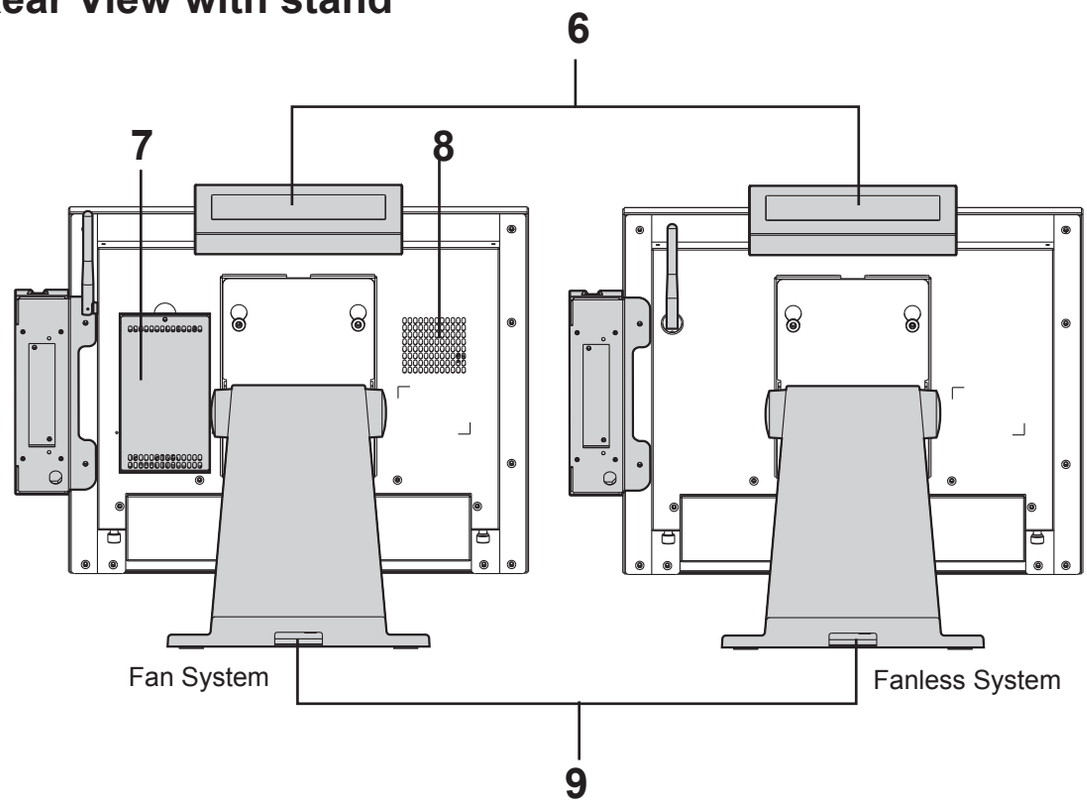


Fanless System

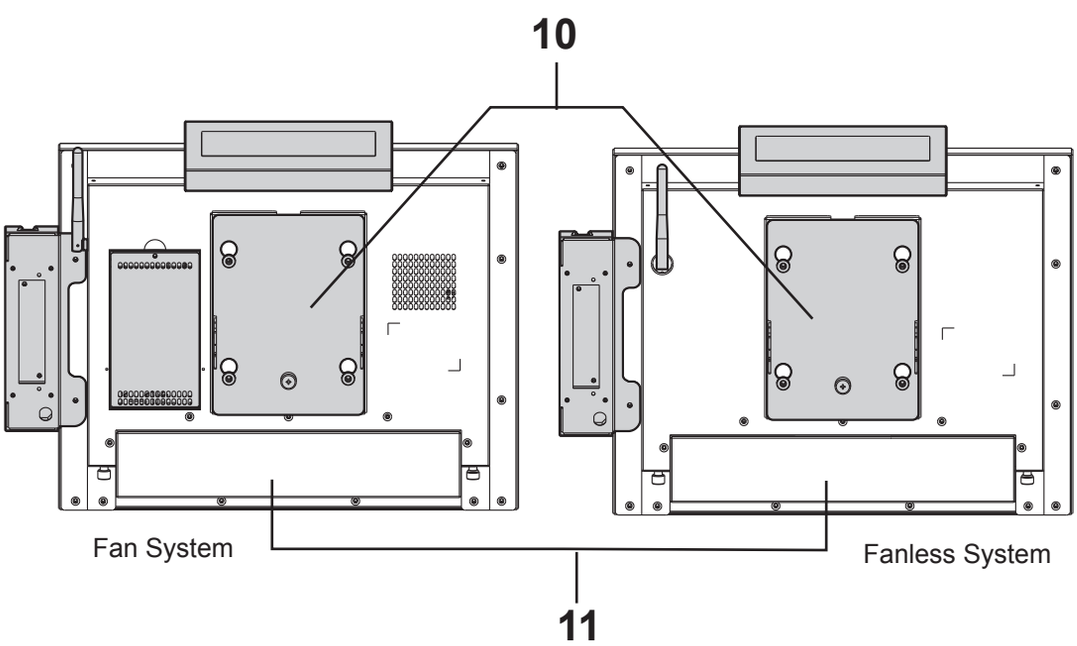
Fan System

Item No.	Description
1	Touch Screen
2	MSR Module (Optional)
3	External Antenna (Optional)
4	Hinge Cover for stand installation
5	Stand

2-3. Rear View with stand

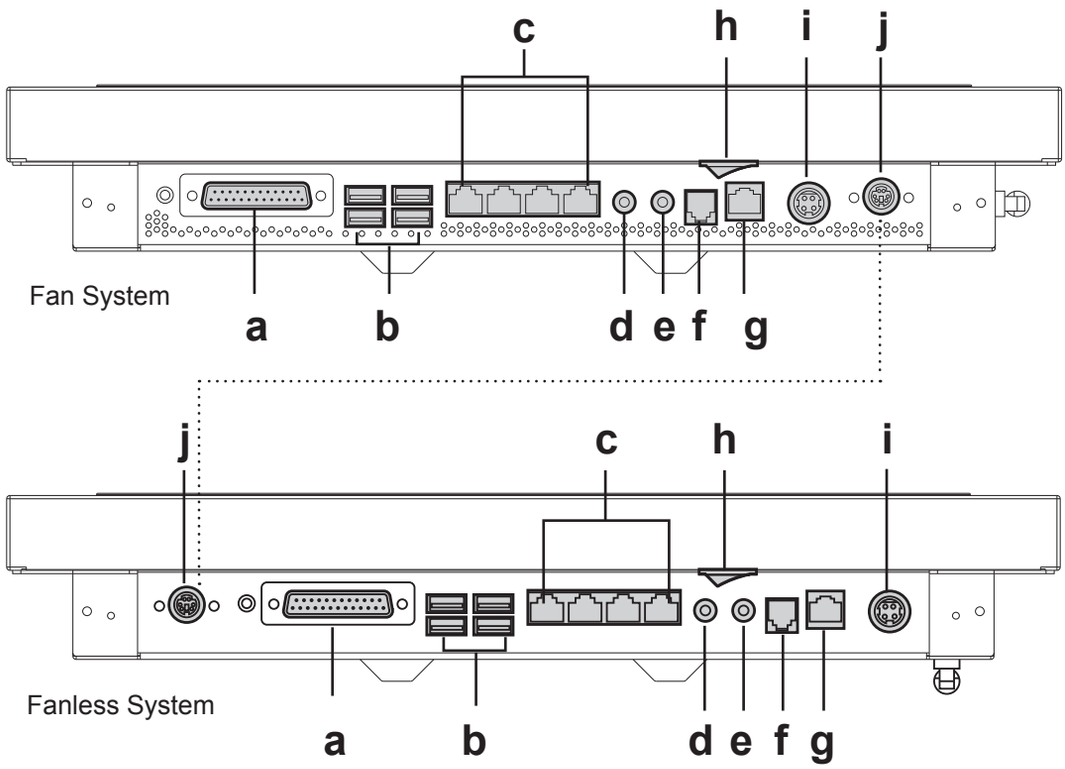


2-4. Rear View without wall mount bracket



Item No.	Description
6	VFD (Optional)
7	HDD Door for fan system
8	Ventilation for fan system
9	Cable management outlet
10	VESA hinge bracket
11	I/O ports cover

2-5. I/O Ports View

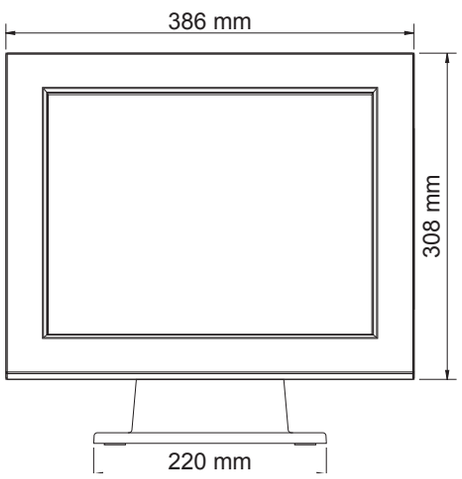


Item No.	Description
a	Parallel
b	USB x 4
c	COM 1, 2, 3, 4 (from right to left)
d	Line-out
e	MIC-in
f	Cash Drawer (12V or 19V, can support 24V)
g	LAN
h	Power Switch
i	DC-In
j	PS/2

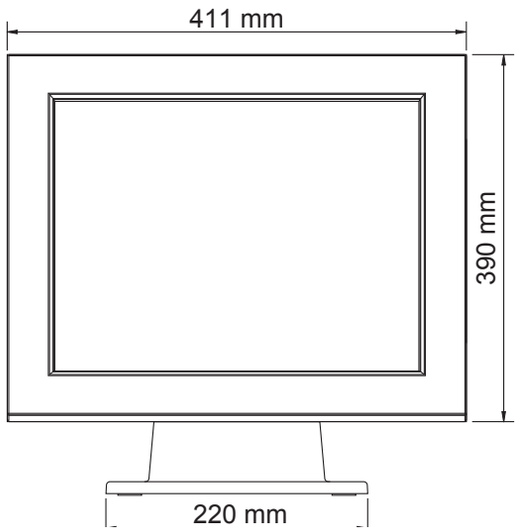
Note: The I/O ports location may slightly different depending to the fan or fanless system installed.

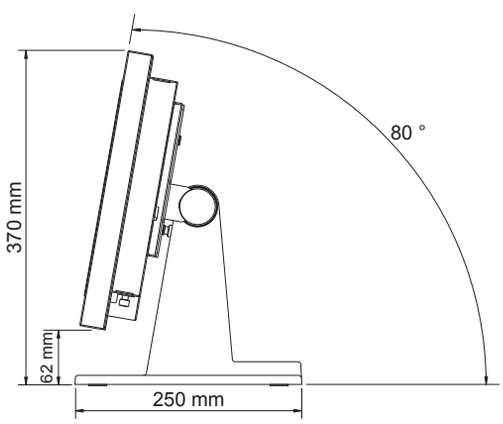
2-6. System Dimension

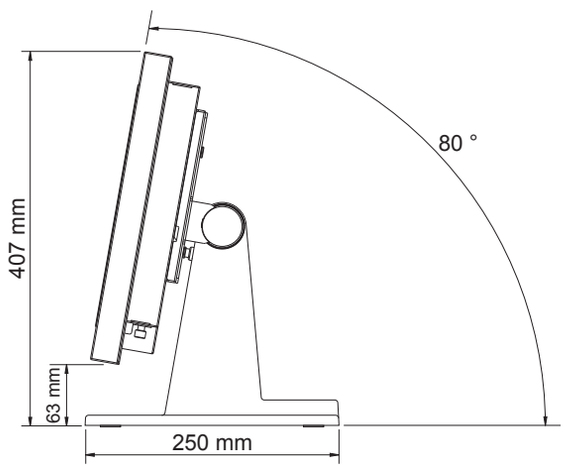
15" System



17" System







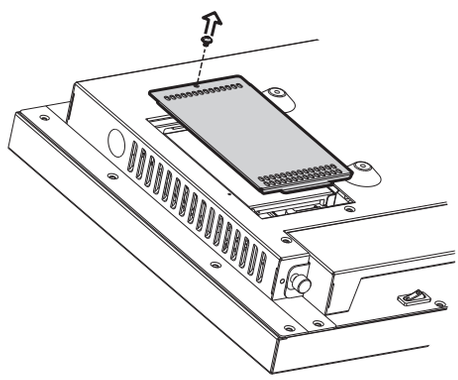
3. System Assembly

To remove and replace the HDD, please follow below steps. The procedures may be different depending on the fan or fanless system being installed.

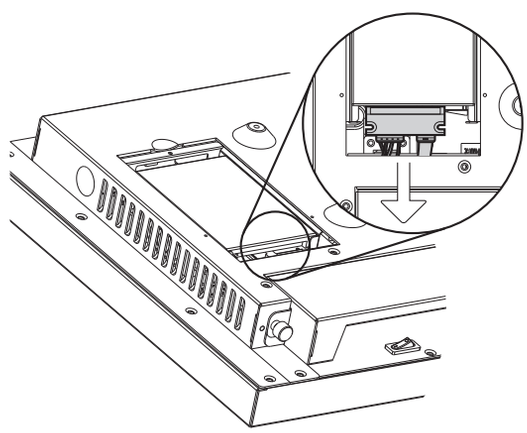
3-1. HDD replacement for fan system

1. Turn to the rear side of the system.

2. Unscrew the screw (x1) securing the HDD door and the rear cover of the system.

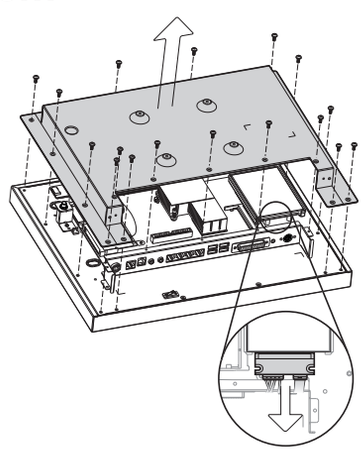


3. Disconnect the SATA cable from the drive.



3-2. HDD replacement for fanless system

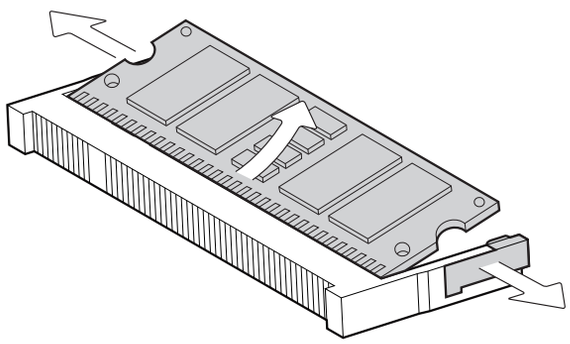
1. Turn to the rear side of the system and unfasten the screws (x17) to separate the rear cover from the system. The HDD is installed on the motherboard. If your system install with a stand or a wall mount bracket, please remove them beforehand. (Refer to Chapter 4-3 or 4-4)
2. Disconnect the HDD cable and replace the HDD.



3-3. RAM Replacement

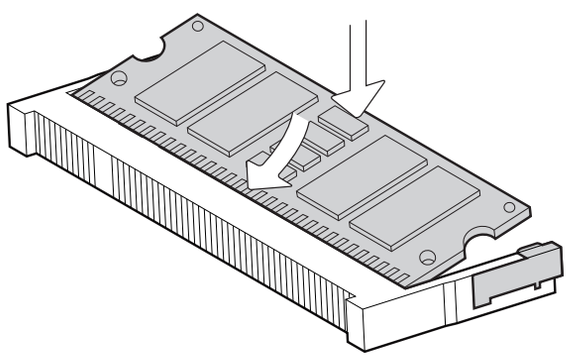
Please open the rear cover (see Chapter 3-1 or 3-2) first then remove and replace the RAM module. You can refer to the motherboard layout to find the memory compartment. (See chapter 6 for different motherboard)

Removing a RAM module



1. Please Open the rear cover by unfasten the screws (x17) to access the motherboard.
2. Use both fingers to pull the ejector clips out of the sides of the module.
3. Slide out to take out the memory module from the memory slot.

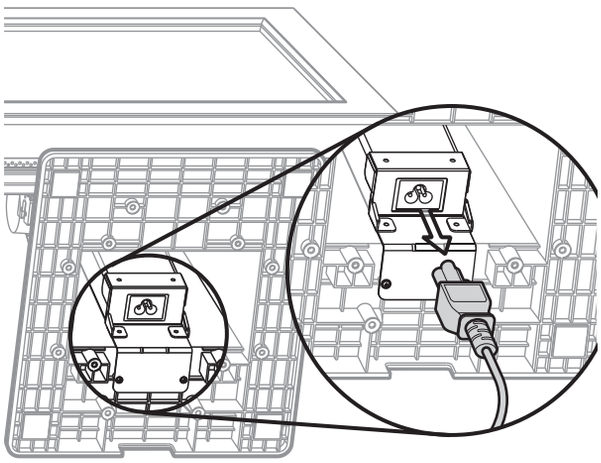
Installing a RAM module



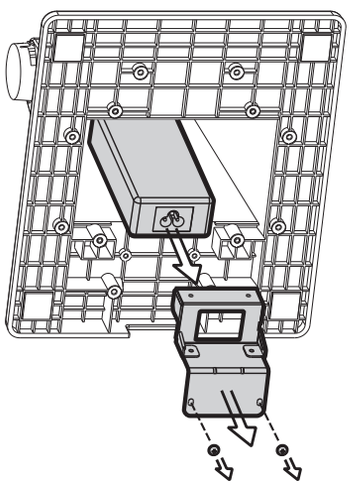
4. Slide the memory module into the memory slot and press down until it fix with the ejector clips.

3-4. Power Adapter Replacement

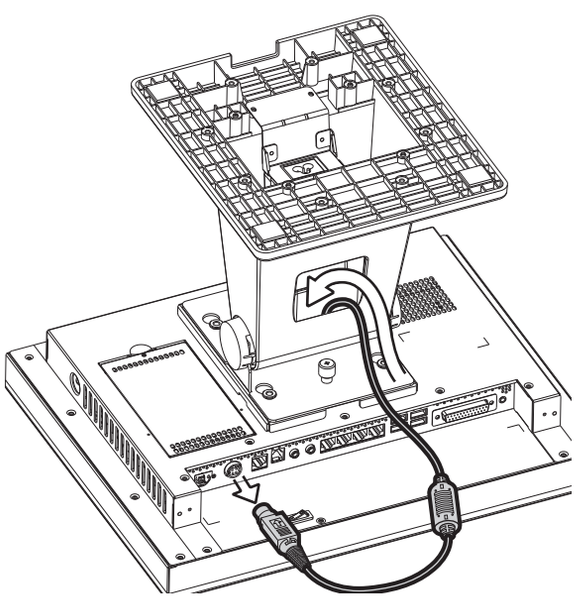
1. Disconnect the power cable from the adapter pre-installed in the power bracket attached in the stand.



2. Unscrew the screws (x2) and separate the power bracket from the stand.



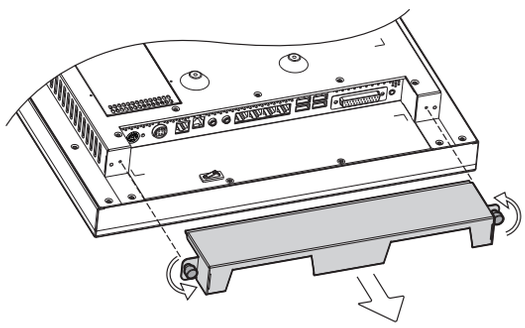
3. Disconnect the other end of the power adapter from the connector on the I/O panel.
4. Draw out the power adapter gently through the cable management hole on the stand.
5. Replace the power adapter by reversing the procedure of above steps.



4. Peripheral Installation

4-1. MSR Installation

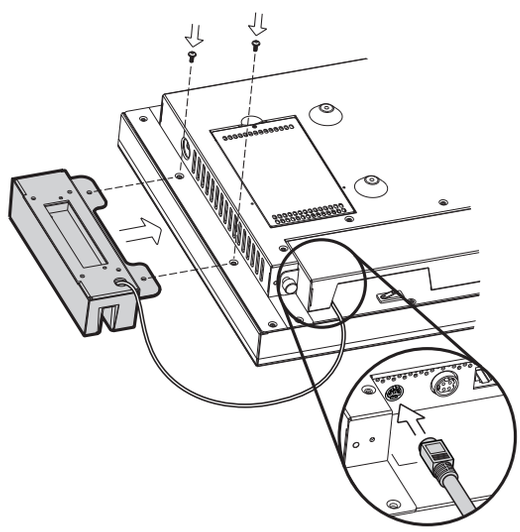
1. Unfasten the thumb screws (x2) to remove the I/O cover.



2. Connect the MSR module into the system and fasten the screws (x2).

3. Connect the PS/2 Connector into the PS/2 port on the I/O panel.

Note: the PS/2 port locates in different places on the I/O panel according to the fan or fanless system being installed.



4-2. VFD Installation

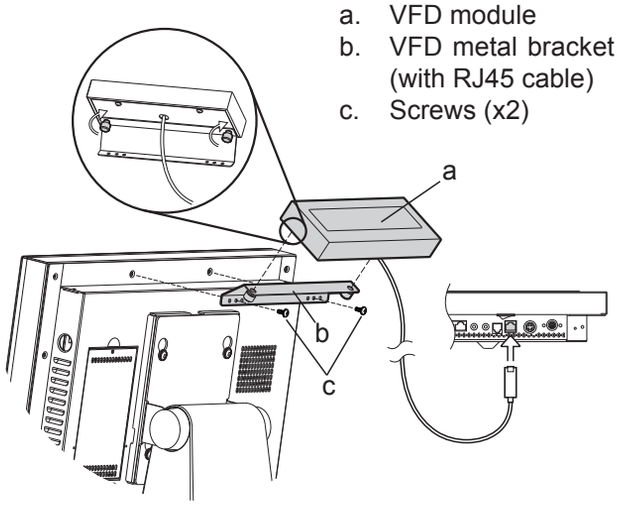
1. Connect the VFD metal bracket into the system with screws (x2)

2. Fasten the VFD module to the metal bracket by fastening the thumb screws (x2).

3. Connect the VFD cable to the RJ45 connector on the I/O panel.

VFD Accessories

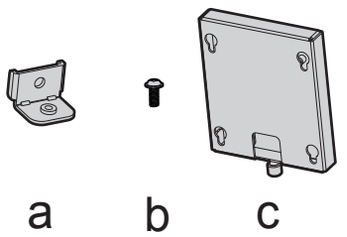
a. VFD module
b. VFD metal bracket (with RJ45 cable)
c. Screws (x2)



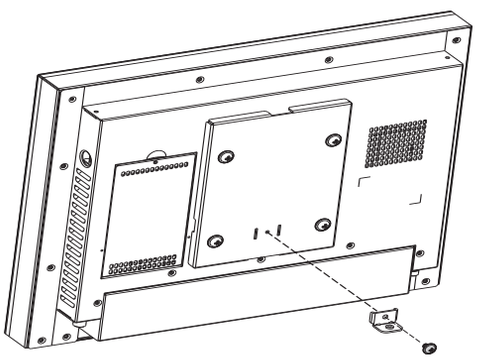
4-3. Wall Mount Kit Assembly

Accessories items

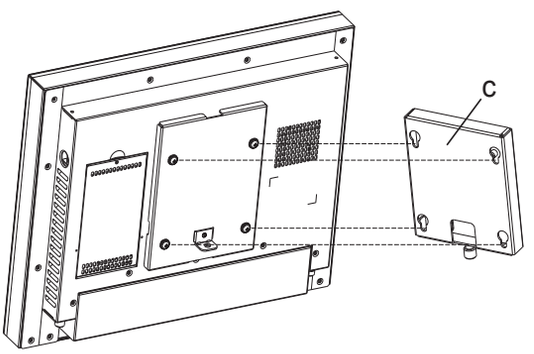
a. Metal bracket with thumb screw
b. Screw x 1
c. Wall mount bracket



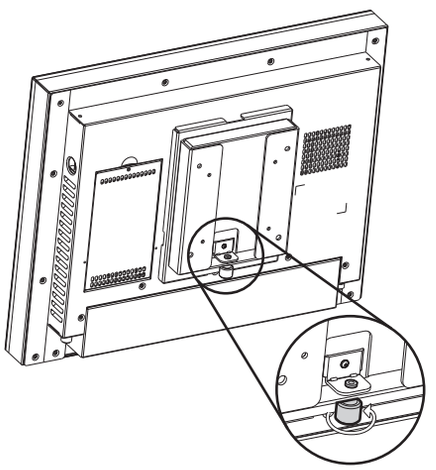
1. Fix the metal bracket (a) to the VESA bracket and the display with the screw (b) (x1).



2. Align the tear drop holes of the wall mount bracket (c) into the 4 VESA bracket screws.



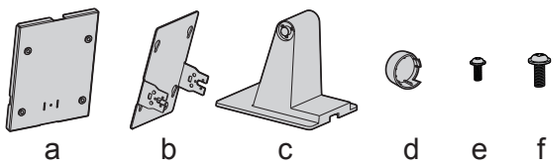
3. Fasten the thumb screw of the wall mount bracket (a) to fix the wall mount bracket (c) to the VESA bracket.



4-4. Desktop Stand Assembly

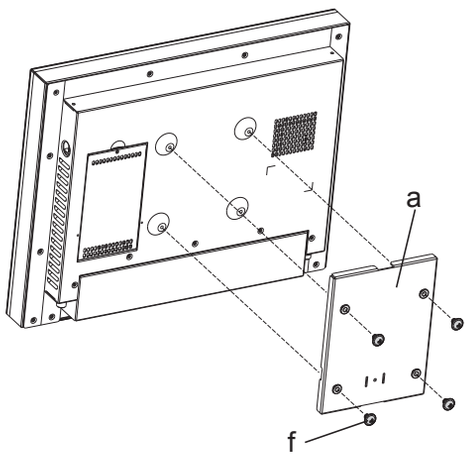
Accessories items

a. VESA bracket
b. Stand bracket
c. Stand
d. Hinge cover x2
e. Screws for both sides of stand x6
f. Screws for VESA bracket x 4



VESA bracket assembly

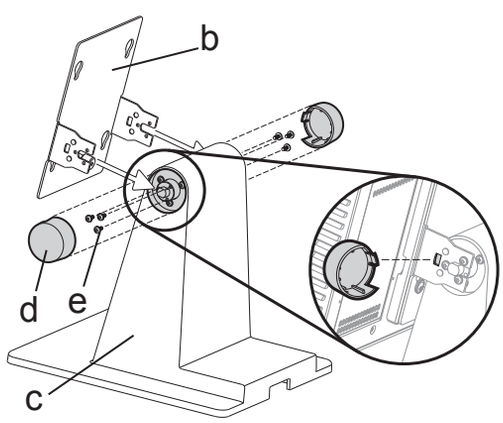
1. Align the standard VESA mounting holes of the VESA bracket (a) and the display and fix them with the screws provided (f) (x4).



Stand bracket assembly

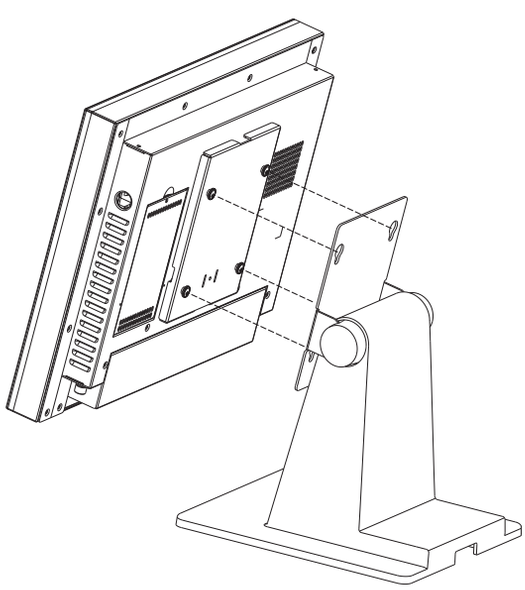
2. Align the guide slot of the stand bracket (b) into the hinge shaft of the stand (c).

3. Fasten the screws (e) (x3) on each sides to fix the stand bracket (b) to the stand (c).



4. Align the hinge cover (d) (x2) into the right position of the stand bracket (b) and fix it until you hear a click sound.

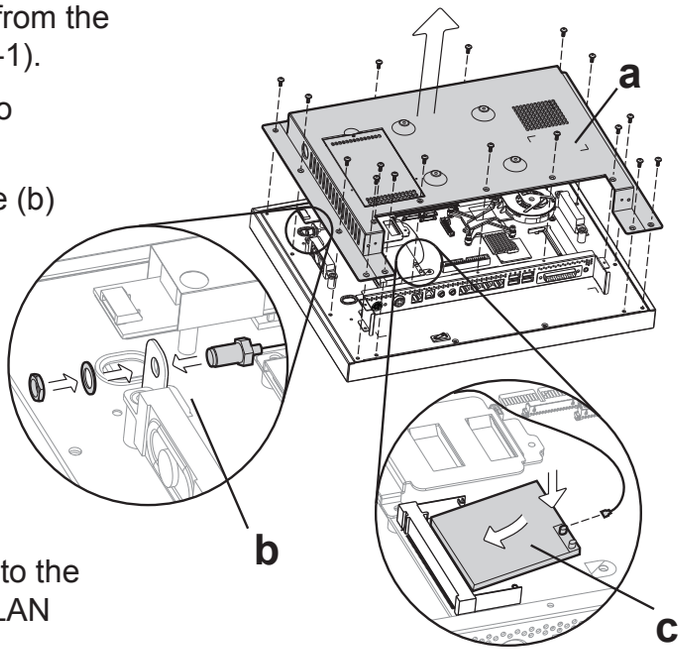
5. Align the screws (f) (x4) on the VESA bracket (a) pre-installed on the display to the four tear drop holes of the stand bracket (b) pre-installed with the stand.



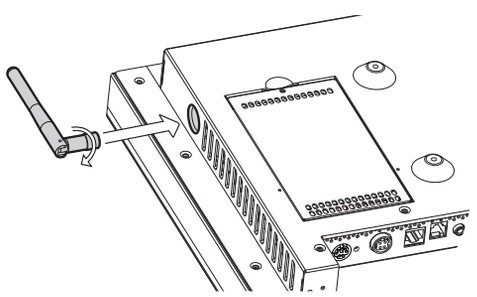
4-5. Wireless LAN Installation

4-5-1. On a Fan System

1. Disconnect the HDD cable from the system first (see Chapter 3-1).
2. Unscrew the screws (x17) to remove the rear cover (a).
3. Assemble the antenna cable (b) by fasten the nut, washer and the coaxial cable as picture instructs.
4. Insert the WLAN card (c) to the WLAN socket on the motherboard and press it downward until the ejector clips lock it in place.
5. Connect the antenna cable to the “main connector” on the WLAN card.



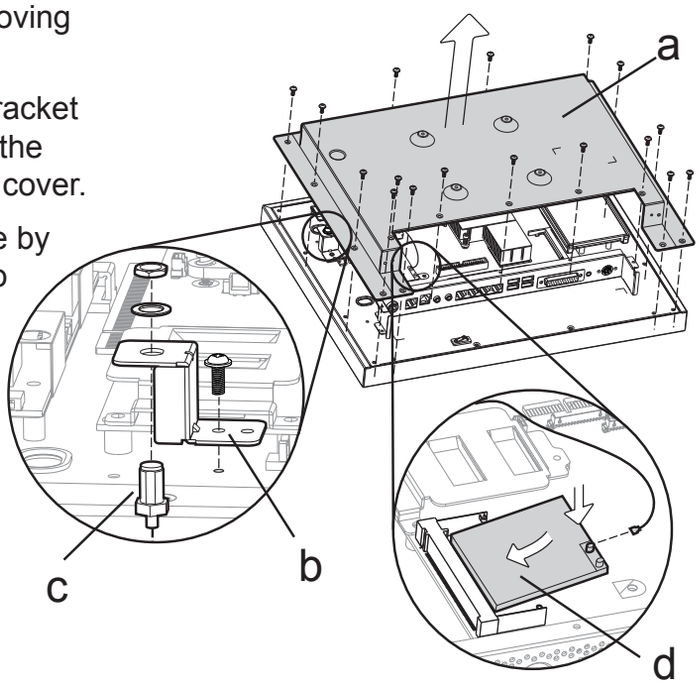
6. Cover the rear cover by reversing the step 2.
7. The pre-drilled hole for the external antenna installation is built in the side of the rear cover on a fan system. Rotate the external antenna clockwise and fasten to the connector of the internal antenna cable.



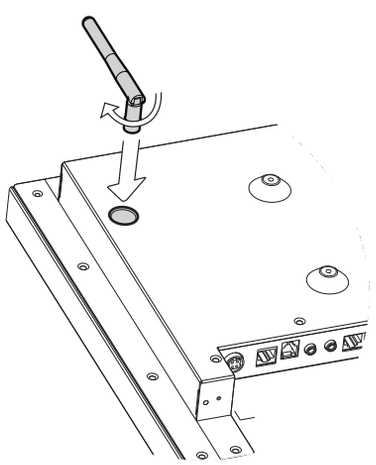
4-5-2. On a Fanless System

For installing the external antenna and the wireless LAN card for fanless System, please see below pictures and instructions.

1. Open the rear cover by removing the screws (x17)
2. Fix the antenna mounting bracket (b) with the screw (x1) onto the LCD chassis under the rear cover.
3. Assemble the antenna cable by inserting the coaxial cable to the pre-drilled hole of the bracket (b) and fastening with the nut and the washer with the mounting bracket.
4. Insert the WLAN card (c) to the WLAN socket on the motherboard and press it downward until the ejector clips lock it in place.
5. Connect the antenna cable to the “main connector” on the wireless LAN card.



6. Cover the rear cover again by reverse the step 2.
7. The drilled hole is built-in the rear side of the rear cover on a fanless system. Rotate the external antenna clockwise and fasten to the connector of internal antenna cable.

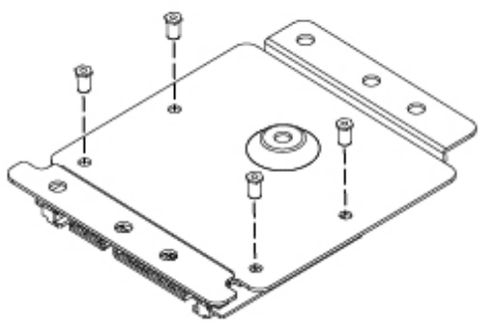


4-6. SSD Card Replacement

If your system equipped with SSD Card instead of hard drive disk as storage device, please follow below steps to replace the SSD card.

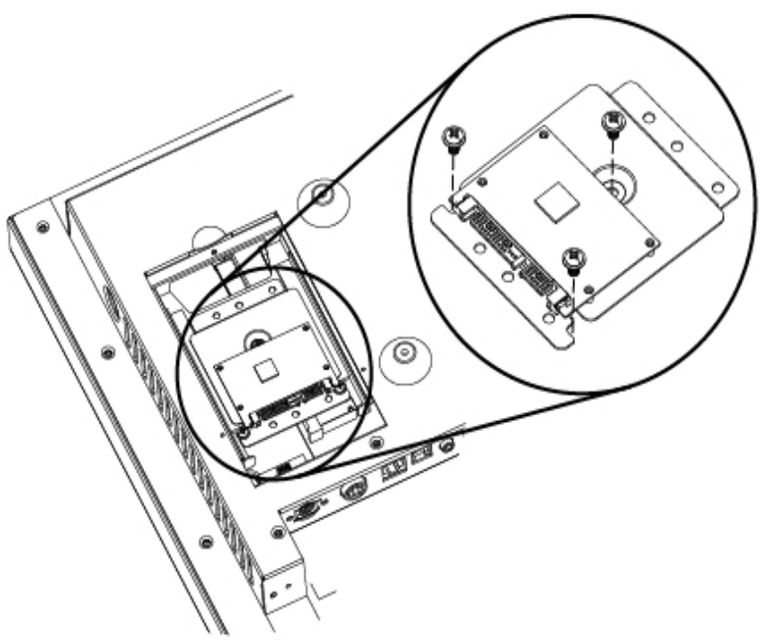
4-6-1. On a Fan System

1. Fasten the screw(x4) on the rear side of the SSD holder bracket to fix the SSD card.



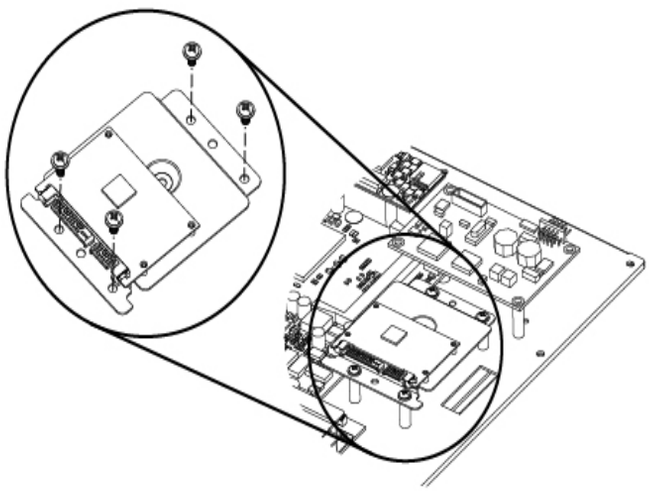
2. Turn to the rear side and open the HDD door on a fan system (see Chapter 3-1).

3. Fasten the screw (x3) as shown to fix the SSD module.



4-6-2. On a Fanless System

1. Follow 4-6-1 step 1 to assemble SSD module.
2. Turn to the rear side and open the rear cover on a fanless system (see Chapter 3-2).
3. Fasten the screw (x4) as shown to fix the SSD module.

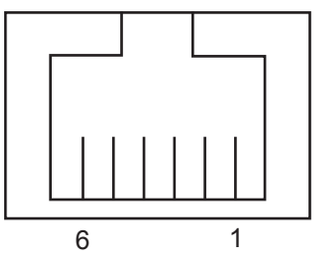


4-7. Cash Drawer Installation

4-7-1. For B78 motherboard

You can install a cash drawer through the cash drawer port. Please verify the pin assignment before installation.

Cash Drawer Pin Assignment



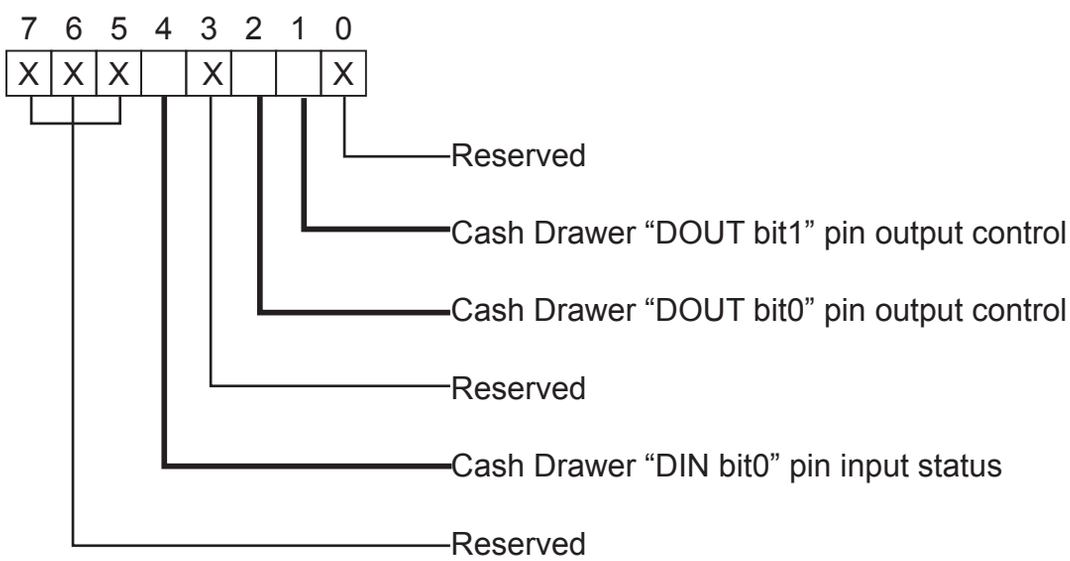
Pin	Signal
1	GND
2	DOUT bit0
3	DIN bit0
4	12V / 19V
5	DOUT bit1
6	GND

Cash Drawer Controller Register

The Cash Drawer Controller use one I/O addresses to control the Cash Drawer.

Register Location: 4B8h
Attribute: Read / Write
Size: 8bit

BIT	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
Attribute	Reserved			Read	Reserved	Write		Reserved


7 6 5 4 3 2 1 0
X X X X
Reserved
Cash Drawer “DOUT bit1” pin output control
Cash Drawer “DOUT bit0” pin output control
Reserved
Cash Drawer “DIN bit0” pin input status
Reserved

Bit 7: Reserved.
Bit 6: Reserved.
Bit 5: Reserved.
Bit 4: Cash Drawer “DIN bit0” pin input status.
= 1: the Cash Drawer closed or no Cash Drawer.
= 0: the Cash Drawer opened.
Bit 3: Reserved.
Bit 2: Cash Drawer “DOUT bit0” pin output control.
= 1: Opening the Cash Drawer
= 0: Allow closing the Cash Drawer
Bit 1: Cash Drawer “DOUT bit1” pin output control.
= 1: Opening the Cash Drawer
= 0: Allow closing the Cash Drawer
Bit 0: Reserved

Note: Please follow the Cash Drawer control signal design to control the Cash Drawer

Cash Drawer Control Command Example

Use Debug.EXE program under DOS or Windows98

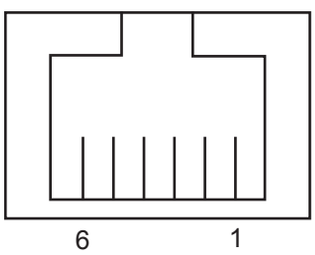
Command	Cash Drawer
O 4B8 04	Opening
O 4B8 00	Allow to closing
► Set the I/O address 4B8h bit2 =1 for opening the Cash Drawer by “DOUT bit0” pin control. ► Set the I/O address 4B8h bit2 = 0 to allow closing Cash Drawer.	

Command	Cash Drawer
I 4B8	Check status
► The I/O address 4B8h bit4 =1 means the Cash Drawer is closed or no Cash Drawer. ► The I/O address 4B8h bit4 =0 means the Cash Drawer is open.	

4-7-2. For B68/B98/C48 motherboard

You can install a cash drawer through the cash drawer port. Please verify the pin assignment before installation.
Below cash drawer installation is applicable for B68, B98 and C48 motherboard.

Cash Drawer Pin Assignment



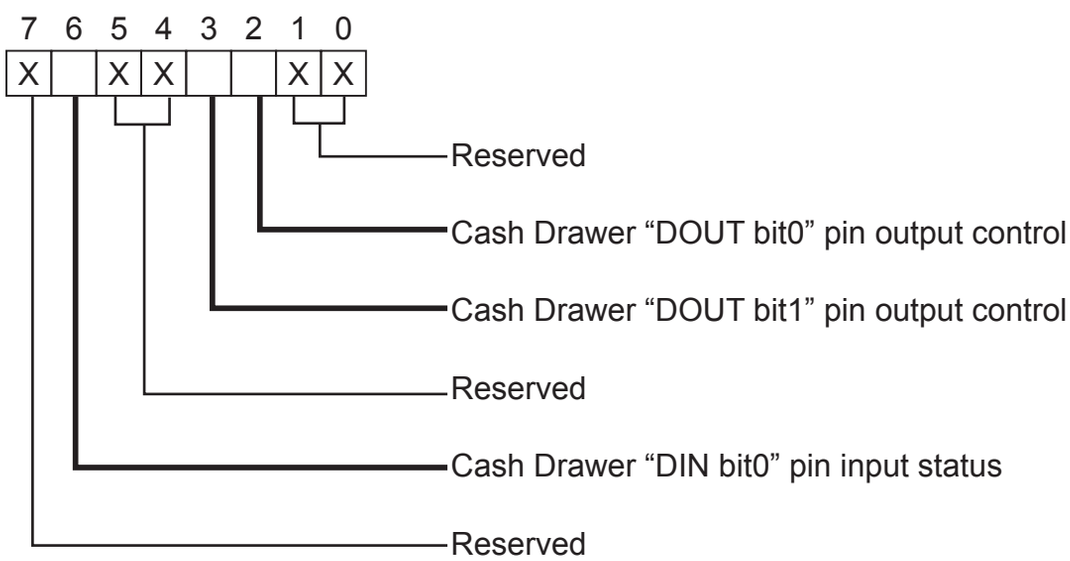
Pin	Signal
1	GND
2	DOUT bit0
3	DIN bit0
4	12V / 19V
5	DOUT bit1
6	GND

Cash Drawer Controller Register

The Cash Drawer Controller use one I/O addresses to control the Cash Drawer. The Cash Drawer Control Register and the Cash Drawer Status Register.

Register Location: 48Ch
Attribute: Read / Write
Size: 8bit

BIT	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
Attribute	Reserved	Read	Reserved		Write		Reserved	


7 6 5 4 3 2 1 0
X X X X X X
Reserved
Cash Drawer “DOUT bit0” pin output control
Cash Drawer “DOUT bit1” pin output control
Reserved
Cash Drawer “DIN bit0” pin input status
Reserved

Bit 7: Reserved
Bit 6: Cash Drawer “DIN bit0” pin input status.
= 1: the Cash Drawer closed or no Cash Drawer
= 0: the Cash Drawer opened
Bit 5: Reserved
Bit 4: Reserved
Bit 3: Cash Drawer “DOUT bit1” pin output control.
= 1: Opening the Cash Drawer
= 0: Allow close the Cash Drawer
Bit 2: Cash Drawer “DOUT bit0” pin output control.
= 1: Opening the Cash Drawer
= 0: Allow close the Cash Drawer
Bit 1: Reserved
Bit 0: Reserved

Note: Please follow the Cash Drawer control signal design to control the Cash Drawer.

Cash Drawer Control Command Example

Use Debug.EXE program under DOS or Windows98

Command	Cash Drawer
O 48C 04	Opening
O 48C 00	Allow to close
► Set the I/O address 48Ch bit2 =1 for opening Cash Drawer by “DOUT bit0” pin control. ► Set the I/O address 48Ch bit2 = 0 for allow close Cash Drawer.	

Command	Cash Drawer
I 48C	Check status
► The I/O address 48Ch bit6 =1 mean the Cash Drawer is opened or not exist. ► The I/O address 48Ch bit6 =0 mean the Cash Drawer is closed.	

5. Specification

Motherboard	B68	B78		B98	C48
Fan/Fanless	**Fanless**	**Fanless**	**Fan (performance)**	**Fan (Performance)**	**Fanless**
CPU Support	Intel Atom N270 processors 1.6G (BGA)	Intel Celeron M ULV 1.0GHz (BGA)	Intel Celeron M 1.5GHz / Pentium M 1.8GHz (Socket)	Intel Celeron M 1.86GHz / Core duo 2.0GHz / Core 2 duo 1.66GHz (socket)	Intel Pineview D525 dual core 1.8G L2 1M, FSB800MHz
Chipset	Intel 945GSE + ICH7M FSB 533MHz	Intel 852GM + ICH4 FSB 400MHz		Intel 945GME + ICH7M FSB 400/533/667MHz	CPU with Graphic built-in + ICH 8M
System Memory	2 x DDR2 SO-DIMM Slot support up to 2GB	2 x DDR SO-DIMM Slot support up to 2GB		2 x DDR2 SO-DIMM Slot support up to 4GB	2 x DDR3 DIMM up to 4GB, FSB 800Mhz
Graphic Memory	Share system memory up to 224MB	Shared system memory up to 64MB		Shared system memory up to 224MB	Intel GMA 3150, share system memory up to 256MB
LCD Touch Panel					
Brightness	15" TFT LCD: 250nits 17" TFT LCD: 250~400nits				
Maximal Resolution	15" TFT LCD: 1024 x 768 17" TFT LCD: 1280 x 1024				
Touch Screen Type	Resistive / SAW (optional)				
Tilt Angle	0° ~ 80°				
Storage					
HDD	one slim HDD bay support SATA HDD				
Flash Memory	by optional SSD card (without HDD)				
Expansion					
Mini-PCI Slot	N/A	1			N/A
Mini-PCI-E Slot	1	N/A			1
External I/O Ports					
USB	4 ports (V2.0)				
PS2	1				
Serial / COM	4 x COM ports RJ-45 connectors (COM1 & COM2 standard RS-232; COM3 & COM4 pin9 with 5V /12V power by jumper)				4 x RJ 45 COM (COM1/COM2 standard RS-232 without power, COM3 / COM4 powered COM with power enable /disable by BIOS setting and +5V/+12V by MB setting. COM3 default +5V/ COM4 default +12V)
Parallel	1				
LAN (10 /100 / 1000)	1 x RJ45				
DC Jack	1				

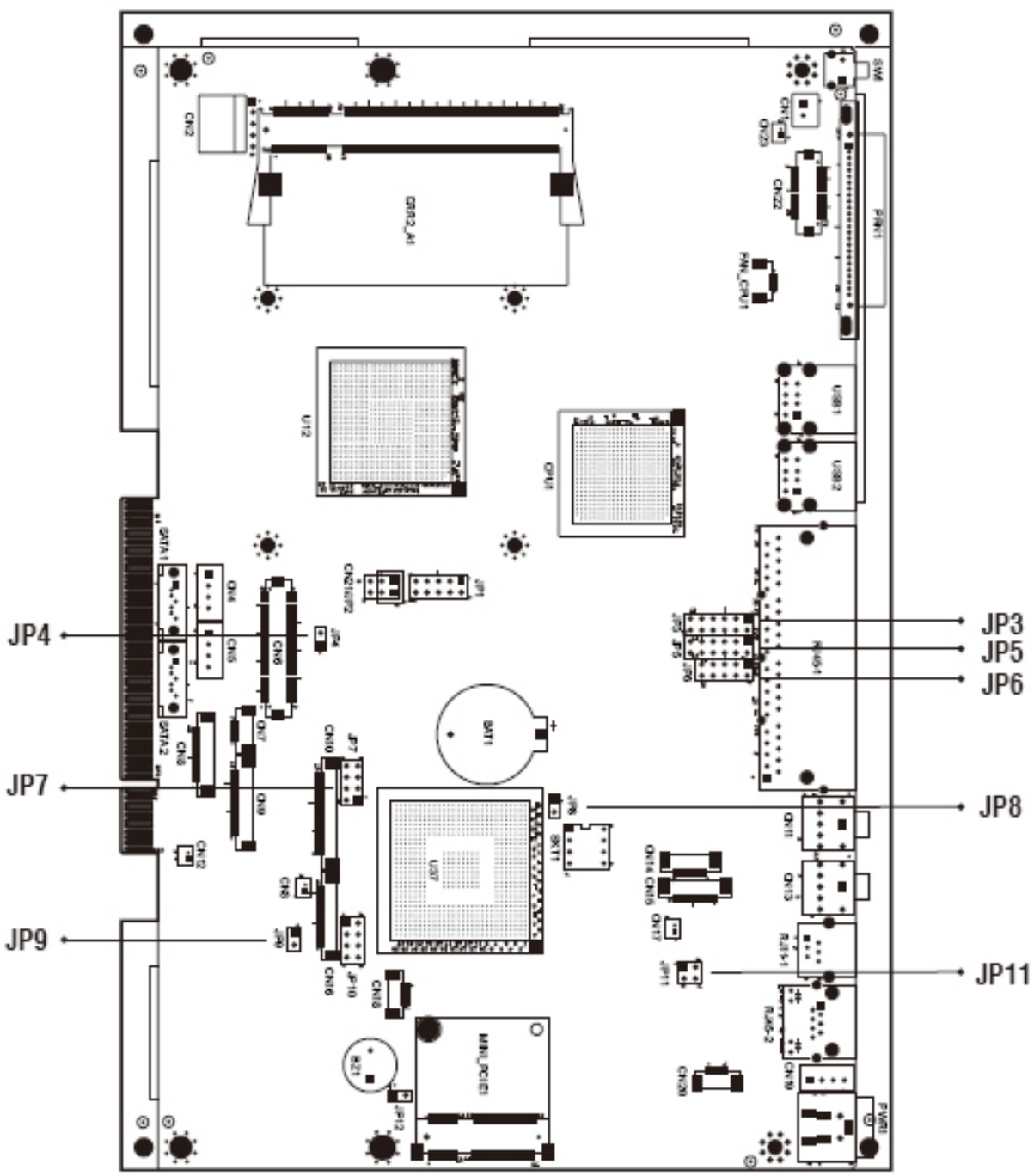
Motherboard	**B68**	**B78**		**B98**	**C48**
Cash Drawer Port	1 x RJ 11 (12V /19V)				
Audio Jack	1 x Line-out, 1 x Mic-in				
Audio					
Built in Speaker	N/A	N/A	2x2W	2x2W	N/A
Power					
Power Adapter	19V, 90W				
Control					
Power Button	1				
Peripheral					
Metal MSR	3 Tracks MSR (PS/2)				
Metal Customer Display	Flush mount VFD display 2 x 20 characters (COM)				
Communication					
Wireless LAN	802.11 a/b/g wireless LAN card & antenna				
Environment					
EMC & Safety	FCC, Class A, CE, LVD				
Operating Temperature	5°C ~ 35°C (41°F ~ 95°F)				
Storage Temperature	-20°C ~ 55°C (-4°F ~ 140°F)				
Operating Humidity	20% ~ 80% RH non condensing				
Storage Humidity	20% ~ 85% RH non condensing				
Dust & Water Proof	IP 55 (Front bezel)				
Dimension (W x D x H)	Stand at LCD 80 degree : 15" TFT LCD: 386 x 250 x 370 mm (15.2" x 9.8" x 14.6") 17" TFT LCD: 411 x 250 x 390 mm (16.2" x 9.8" x 15.4")				
	Wall mount : 15" TFT LCD: 386 x 60 x 308 mm (15.2" x 2.4" x 12.1") 17" TFT LCD: 411 x 60 x 345 mm (16.2" x 2.4" x 13.6")				
Weight (N.W./G.W.)	15" TFT LCD: 12kgs / 13kgs 17" TFT LCD: 13kgs / 14kgs				
Mounting	100mm x100mm VESA Standard holes				
OS Support	Windows XP Professional, Windows XP Embedded, Windows CE, Windows 7 & Vista , POSReady 2009, Linux	Windows 2000 Professional Embedded, Windows XP, XP Professional Embedded, XP Embedded, Vista (Vista only for B98), POSReady 2009 , Linux			Windows XP Professional, Windows Embedded POSReady 2009, Windows XP Embedded, Windows XP Professional for Embedded, WinCE, Windows 7, Vista, Linux

* This specification is subject to change without prior notice.

6. Jumper Setting

6-1. For B68 Motherboard

6-1-1. Motherboard Layout



Version: B68 v1.0

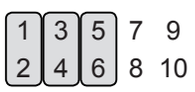
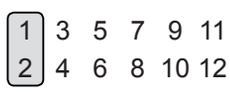
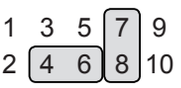
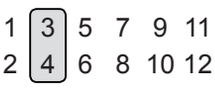
6-1-2. Connectors & Functions

Connector	Purpose
BAT1	CMOS Battery Base (Use CR2023)
CN1	Power On Button
CN2	Touch Sensor
CN3	Power LED
CN4	SATA1 HDD Power Connector
CN5	SATA2 HDD Power Connector
CN6	LCD Interface Connector
CN7	IrDA Connector
CN8	For External Touch Connector
CN9	Inverter Connector
CN10	Card Reader Connector
CN11	Line Out
CN12	LED Power
CN13	MIC In
CN14	Speaker & MIC CONN
CN15	CD-IN CONN
CN16	FT Status Interface
CN17	LAN LED
CN18	USB5
CN19	DC-Jack
CN20	PS2 KEYBOARD
CN21	For Bedside Terminal
CN22	LPT Interface for Touch
CN23	For LPT Touch Reset
DDR2_A1	DDR2 SO-DIMM1
DDR2_A2	DDR2 SO-DIMM2
PRN1	Parallel Port
PWR1	+19V Power Adaptor
RJ11_1	Cash Drawer Connector
RJ45_1	COM1, COM2, COM3, COM4
RJ45_2	LAN
SATA1	SATA Connector

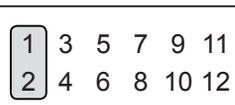
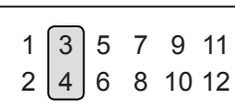
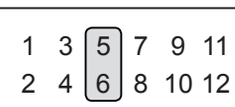
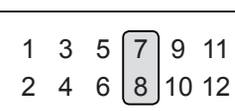
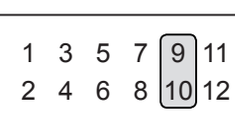
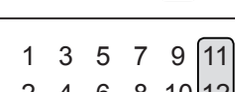
Connector	Purpose
SATA2	SATA Connector
SKT1	SPI ROM
USB1	USB1, USB2
USB2	USB3, USB4
SW1	Power On Bottom
JP1	CRT Connector
JP2	CRT Power/I2C Connector
JP3	COM3/COM4 Power Setting
JP4	VGA Power Setting
JP5	COM2 Connector
JP6	COM2(RS232/422/485) Setting
JP7	LCD ID Setting
JP8	RTC Reset
JP9	Power Mode Setting
JP11	Cash Drawer Power Setting (+12V,+19V)
JP12	Hardware Reset

6-1-3. Jumper Setting

COM2 RS232/485/422 Setting

Function	JP6	JP5
▲RS232		
RS485		
RS422		

COM3 & COM4 Power Setting

Function		JP3
COM3 (Pin 10)	▲RI	
	+5V	
	+12V	
COM4 (Pin 10)	▲RI	
	+5V	
	+12V	

▲ = Manufacturer Default Setting

Cash Drawer Power Setting

Function	JP11
▲+12V	
+19V	

Power Mode Setting

Function	JP9
▲ATX Power	
AT Power	

RTC Reset

Function	JP8
▲CMOS Normal	
CMOS Reset	

VGA Power Setting

Function	JP4
▲No Power	
+12V	

▲ = Manufacturer Default Setting

LCD ID Setting

Panel#	Resolution	LVDS		Output Interface	JP7
		Bits	Channel		
1	1366 x 768	24	Single	LVDS Panel	1 3 [5] [7] 2 4 [6] [8]
2	1440 x 900	24	Dual	LVDS Panel	1 3 [5] 7 2 4 [6] 8
4	1920 x 1080	24	Dual	LVDS Panel	1 3 5 7 2 4 6 8
5	1024 x 768	24	Single	LVDS Panel	1 [3] [5] [7] 2 [4] [6] [8]
6	1280 x 1024	24	Dual	LVDS Panel	1 [3] [5] 7 2 [4] [6] 8
7	800 x 600	24	Single	LVDS Panel	1 [3] 5 [7] 2 [4] 6 [8]
9	1024 x 768	18	Single	LVDS Panel	[1] [3] [5] [7] [2] [4] [6] [8]
11	800 x 600	18	Single	LVDS Panel	[1] [3] 5 [7] [2] [4] 6 [8]
12	800 x 600	18	Single	LVDS Panel	[1] [3] 5 7 [2] [4] 6 8
				CRT	[1] 3 5 7 [2] 4 6 8

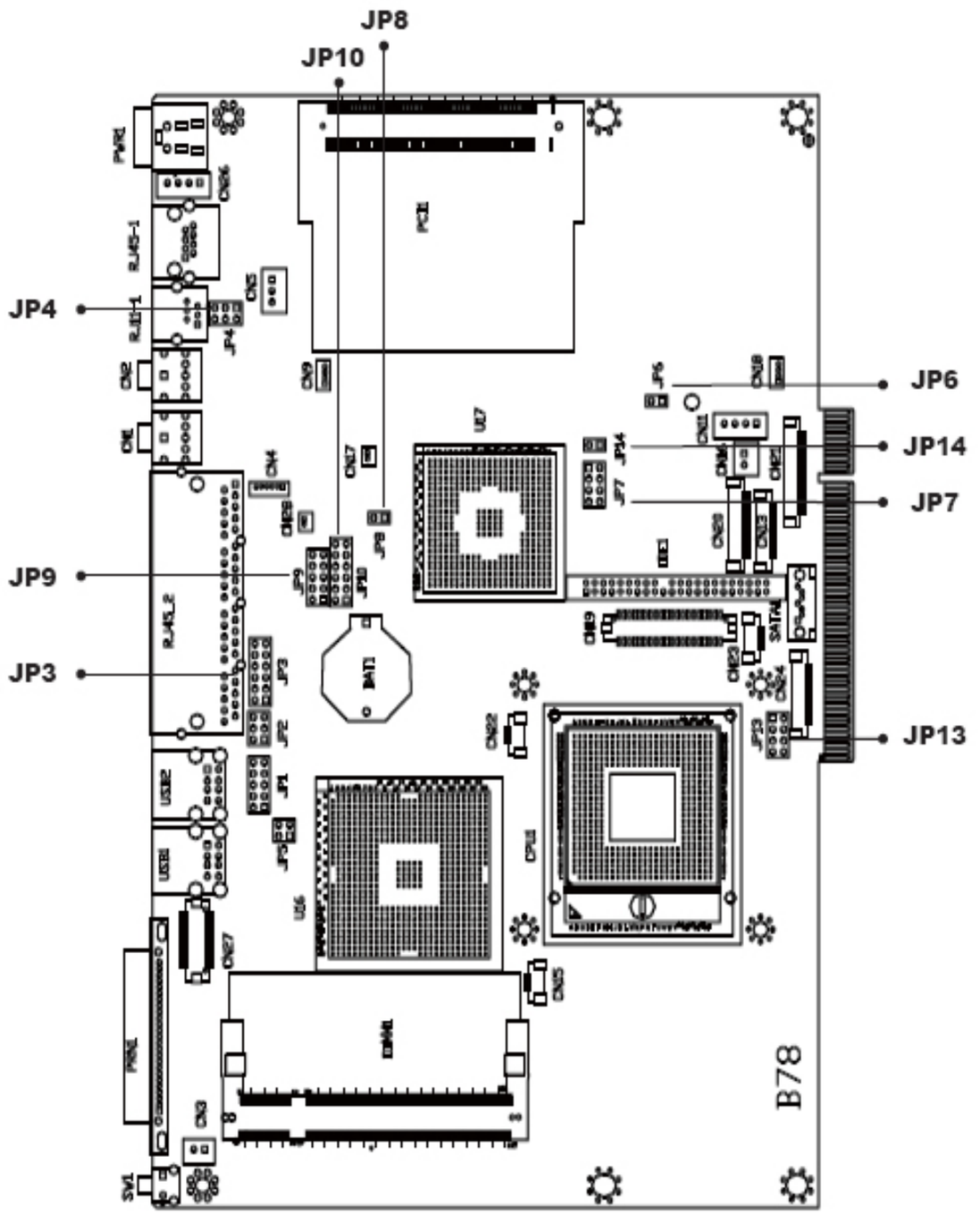
Remark:
Panel ID#12 is specialized for Sharp 12.1” LQ121S1LG41/LQ121S1LG42 panel

1
2 Jumper open

[1]
[2] Jumper short

6-2. For B78 Motherboard

6-2-1. Motherboard Layout



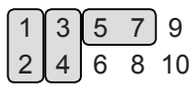
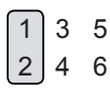
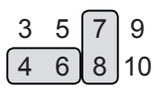
Version: B78 v2.2

6-2-2. Connectors & Functions

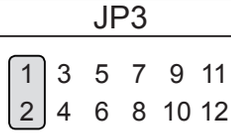
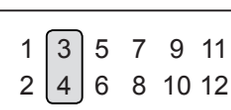
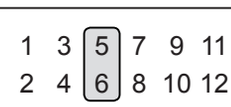
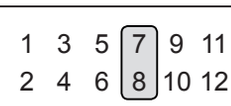
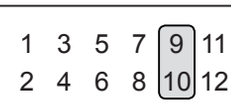
Connector	Purpose
BAT1	CMOS Battery Base (Use CR2023)
CN1	Audio Line Out
CN2	Audio MIC In
CN3	Internal Power Switch
CN4	Speaker & MIC Connector
CN9	CD-IN Connector
CN11	Power Connector For 3.5" HDD
CN13	COM5 for Touch
CN15	CPU FAN Connector
CN16	Hardware Reset
CN18	USB2
CN19	LCD Interface Connector
CN20	Inverter Connector
CN21	Card Reader Connector
CN22	System FAN Connector
CN23	IrDA Connector
CN24	FT Status Interface
CN26	Internal Power In Connector
CN27	Internal LPT Connector
CN28	Internal PCI Reset Output Connector
IED1	Secondary IDE Connector (Pitch = 2.0mm)
PRN1	Parallel Port
PWR1	+19V Power Adaptor
RJ11_1	Cash Drawer Connector
RJ45_1	LAN (On Board)
RJ45_2	COM1, COM2, COM3, COM4
SATA1	SATA Connector
USB1	USB3, USB4
USB2	USB5, USB6
JP1	VGA Port
JP2	VGA Power
JP3	COM3/COM4 Power Setting
JP4	Cash Drawer Power Setting
JP6	Power Mode Setting
JP7	LCD ID Setting
JP8	CMOS Operation Mode
JP9/JP10	COM2 RS232/485/422 Setting
JP13	System Indicator Function
JP14	USB Path Setting

6-2-3. Jumper Setting

COM2 RS232/485/422 Setting

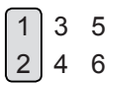
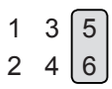
Function	JP10	JP9
▲RS232		
RS485		
RS422		

COM3 & COM4 Power Setting

Function		JP3
COM3 Pin10	▲RI	
	+5V	
	+12V	
COM4 Pin10	▲RI	
	+5V	
	+12V	

▲ = Manufacturer Default Setting

Cash Drawer Power Setting

Function	JP4
▲+12V	
+19V	

Power Mode Setting

Function	JP6
▲ATX Power	
AT Power	

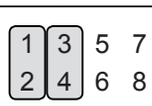
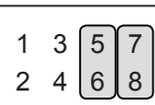
CMOS Operation Mode

Function	JP8
▲CMOS Normal	
CMOS Reset	

USB Path Setting

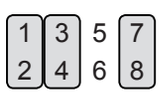
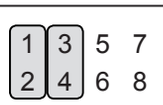
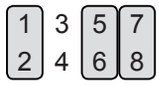
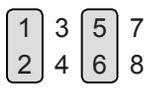
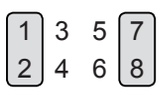
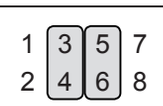
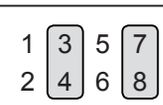
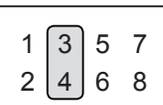
Function	JP14
▲To Docking	
To Motherboard	

System Indicator Function

Function	JP13
▲Disable	
Enable	

▲ = Manufacturer Default Setting

LCD ID Setting

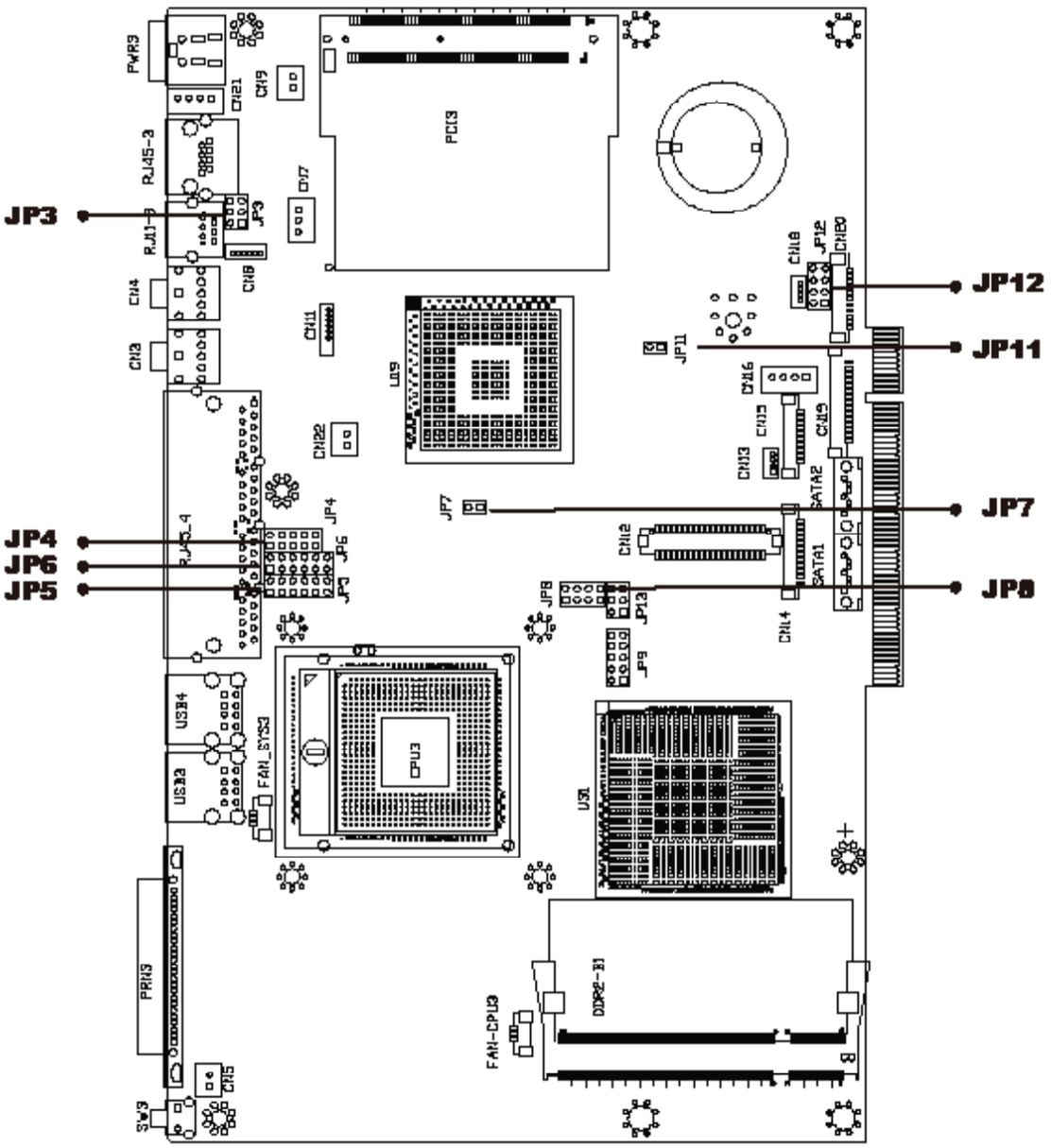
Panel#	Resolution	LVDS		JP7
		Bits	Channel	
1	640 x 480	18	Single	
2	800 x 600	18	Single	
3	1024 x 768	18	Single	
4	1280 x 1024	24	Dual	
5	1024 x 768	24	Single	
6	800 x 600	24	Single	
7	800 x 600	18	Single	
8	800 x 600	18	Single	
9	1024 x 768	24	Single	
10	1440 x 900	24	Dual	
11	1280 x 1024	24	Dual	
12	1440 x 900	18	Dual	

Remark:
Panel ID#12 is specialized for Sharp 12.1" LQ121S1LG41/ LQ121S1LG42 panel

Jumper open Jumper short

6-3. For B98 Motherboard

6-3-1. Motherboard Layout



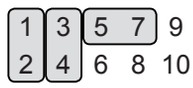
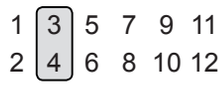
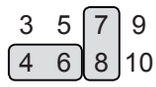
Version: B98 v1.0

6-3-2. Connectors & Functions

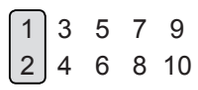
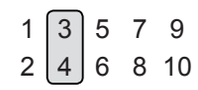
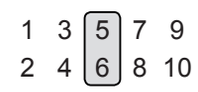
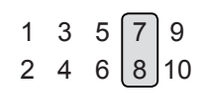
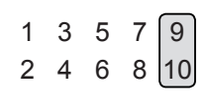
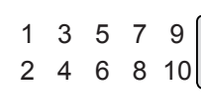
Connector	Purpose
BAT3	CMOS Battery Base (Use CR2023)
CN3	Audio Line Out
CN4	MIC In
CN5	Internal Power On Switch Connector
CN8	Speaker & MIC Connector
CN9	Internal LAN LED
CN11	CD-IN / Line-In Connector
CN12	LCD Interface Connector
CN13	IrDA Connector
CN14	Inverter Connector
CN15	COM5 for Touch
CN16	Power Connector For HDD
CN18	USB5
CN19	Card Reader Connector
CN20	FT Status Interface Connector
CN21	Internal Input Power Connector
CN22	Hardware Reset
DDR2_A1	DDR2 SO-DIMM
DDR2_B1	DDR2 SO-DIMM
FAN_CPU3	CPU FAN Connector
FAN_SYS3	System FAN Connector
MINI_PCIE3	Mini PCI-E Socket
PCI3	Mini PCI Socket
PRN3	Parallel Port
PWR3	+19V Power Adaptor
RJ11_3	Cash Drawer Connector
RJ45_3	LAN (On Board)
RJ45_4	COM1, COM2, COM3, COM4
SATA1	SATA Connector
SATA2	SATA Connector
SKT1	SPI ROM
SW3	Power On Button
USB3	USB1, USB2
USB4	USB3, USB4
JP3	Cash Drawer Power Setting
JP4/JP6	COM2 RS232/485/422 Setting
JP5	COM3/COM4 Power Setting
JP7	CMOS Operation Mode
JP8	LCD ID Setting
JP9	VGA Port
JP10	2nd Display Power
JP11	Power Moder Setting
JP12	System Indicator

6-3-3. Jumper Setting

COM2 RS232/485/422 Setting

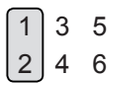
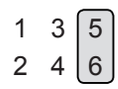
Function	JP6	JP4
▲RS232		
RS485		
RS422		

COM3 & COM4 Power Setting

Function		JP5
COM3 Pin10	▲RI	
	+5V	
	+12V	
COM4 Pin10	▲RI	
	+5V	
	+12V	

▲ = Manufacturer Default Setting

Cash Drawer Power Setting

Function	JP3
▲+12V	
+19V	

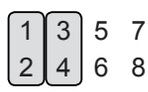
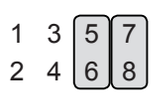
Power Mode Setting

Function	JP11
▲ATX Power	
AT Power	

CMOS Operation Mode

Function	JP7
▲CMOS Normal	
CMOS Reset	

System Indicator

Function	JP12
▲Disable	
Enable	

▲ = Manufacturer Default Setting

LCD ID Setting

Panel#	Resolution	LVDS		Output Interface	JP8
		Bits	Channel		
1	1366 x 768	24	Single	LVDS Panel	1 3 [5] [7] 2 4 [6] [8]
2	1440 x 900	24	Dual	LVDS Panel	1 3 [5] 7 2 4 [6] 8
4	1920 x 1080	24	Dual	LVDS Panel	1 3 5 7 2 4 6 8
5	1024 x 768	24	Single	LVDS Panel	1 [3] [5] [7] 2 [4] [6] [8]
6	1280 x 1024	24	Dual	LVDS Panel	1 [3] [5] 7 2 [4] [6] 8
7	800 x 600	24	Single	LVDS Panel	1 [3] 5 [7] 2 [4] 6 [8]
9	1024 x 768	18	Single	LVDS Panel	[1] [3] [5] [7] [2] [4] [6] [8]
11	800 x 600	18	Single	LVDS Panel	[1] [3] 5 [7] [2] [4] 6 [8]
12	800 x 600	18	Single	LVDS Panel	[1] [3] 5 7 [2] [4] 6 8
				CRT	[1] 3 5 7 [2] 4 6 8

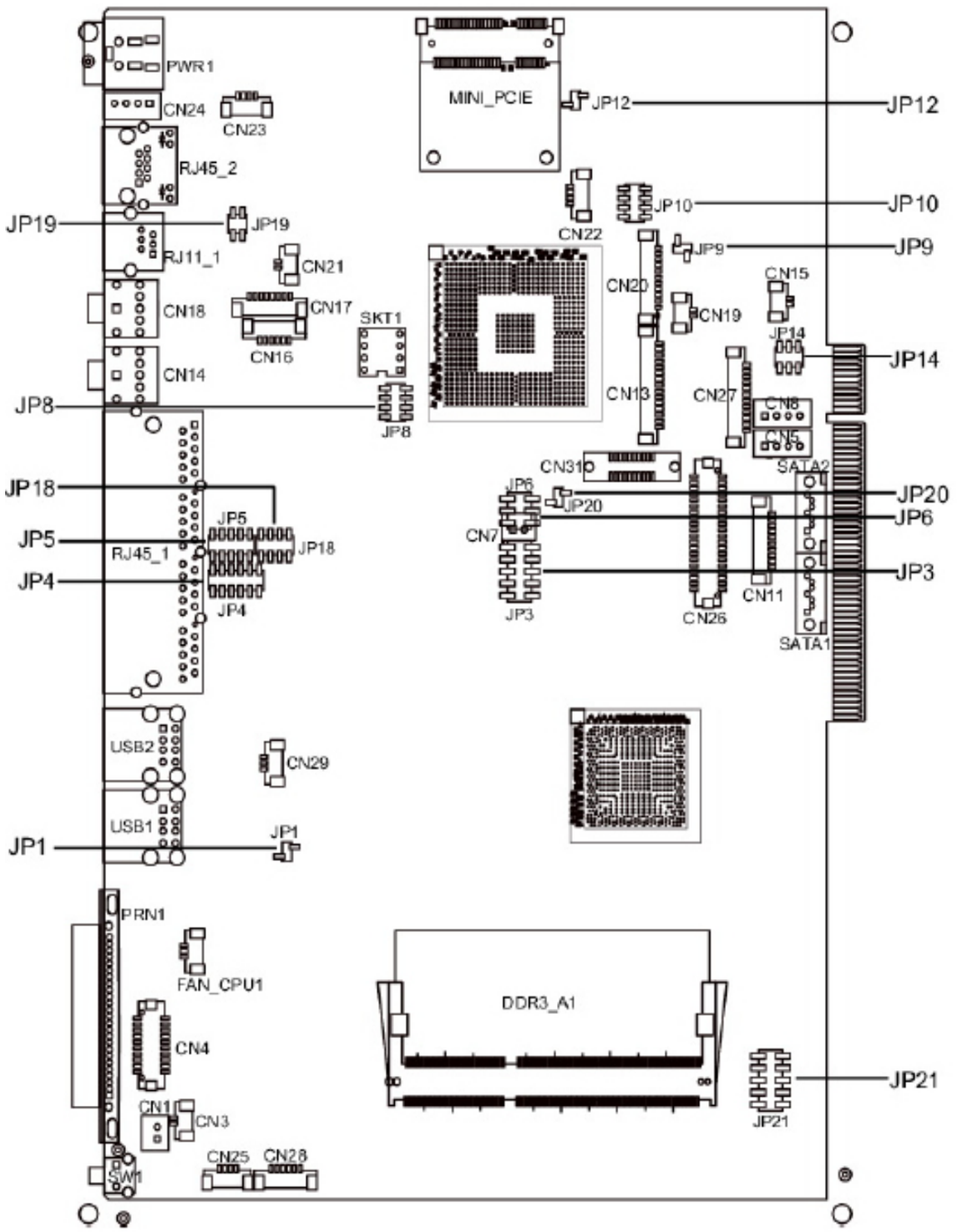
Remark:
Panel ID#12 is specialized for Sharp 12.1" LQ121S1LG41/ LQ121S1LG42 panel

Jumper open

Jumper short

6-4. For C48 Motherboard

6-4-1. Motherboard Layout



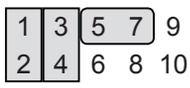
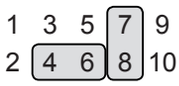
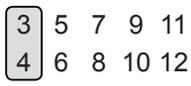
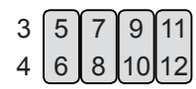
Version: C48 v2.1

6-4-2. Connectors & Functions

Connector	Purpose
CN1	Power Button Connector
CN3	Printer Port Reset
CN4	Printer Port
CN5/8	HDD Power
CN11	COM5 For Touch
CN13	Card Reader Connector
CN14	Line out
CN15	HDD LED
CN16	Speaker & MIC
CN17	CD IN
CN18	MIC IN
CN19	Power LED
CN20/JP10	System Indicator
CN21	LAN LED
CN22	USB Port
CN23	PS2 KEYBOARD
CN24	+19V DC IN
CN25	For GM2621 Debug
CN26	LVDS
CN27	Inverter Connector
CN28	Key Pad
CN29	System Fan
DDR3_A1	DDR3 SO-DIMM1
SATA1	SATA Connector
SATA2	SATA Connector
SW1	Power Button
JP1	CMOS Operation Mode
JP3/6	VGA Port
JP4/5	COM2 RS232/485/422 Setting
JP8	LCD ID Setting
JP9	Power Mode Setting
JP12	System Reset
JP14	Inverter Selection
JP18	COM3/4 Power Setting
JP19	Cash Drawer Power Setting

6-4-3. Jumper Setting

COM2 RS232/485/422 Setting

Function	JP5	JP4
▲RS232		
RS485		
RS422		

Cash Drawer Power Setting

Function	JP19
+19V	
▲+12V	

Power Mode Setting

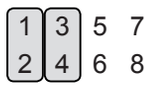
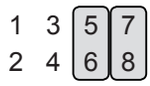
Function	JP9
▲ATX Power	
AT Power	

System Reset

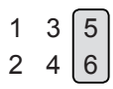
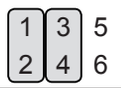
Function	JP12
▲System Normal	
System Reset	

▲ = Manufacturer Default Setting

System Indicator

Function	JP10
▲Disable	
Enable	

Inverter Selection

Function	JP14
▲ CCFL	
LED	

CMOS Operation Mode

CMOS Reset

To clear the CMOS,

1. Remove the power cable from the system.
2. Open the system, and set the ‘CMOS Operation jumper’ from ‘CMOS Normal’ to ‘CMOS Reset’. (refer to the jumper shown below)
3. Connect the power cable to the system, and **power on the system**:
   in ATX mode: press the power button and it will fail power on
   in AT mode: turn on system power
4. Remove the power cable from the system.
5. Return the "CMOS Operation mode" jumper setting from "CMOS Reset" to "CMOS normal".
6. Connect the power cable and power on the system.

Function	JP1
▲CMOS Normal	
CMOS Reset	

▲ = Manufacturer Default Setting

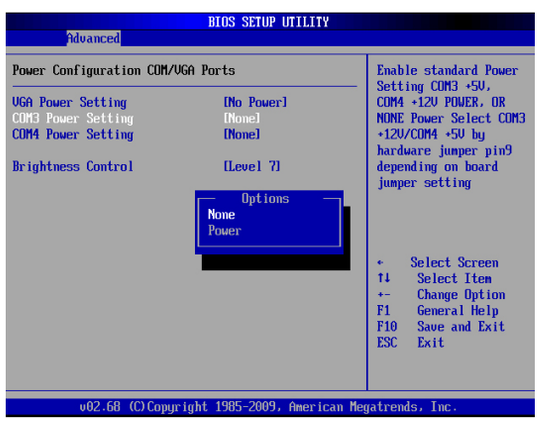
COM3 & COM4 Power Setting

For C48, COM3/COM4 power adjustment must be made by BIOS/Utility and Jumper. Since COM3/COM4 default is “None“ meaning no power, power must be on through BIOS prior to physical jumper change.

BIOS/Utility setup

1. Press <DEL> key to enter BIOS SETUP UTILITY when system boot up.
2. Find tab "Advanced".
3. Select "Power Configuration COM/VGA Ports" and press <Enter> to go to sub screen.

4. To switch on the power, select "Power". Please save the change before exiting BIOS so as to go for physical jumper adjustment.


BIOS SETUP UTILITY
Advanced
Power Configuration COM/VGA Ports
VGA Power Setting [No Power]
COM3 Power Setting [None]
COM4 Power Setting [None]
Brightness Control [Level 7]
Options
None
Power
Enable standard Power Setting COM3 +5V, COM4 +12V POWER, OR NONE Power Select COM3 +12V/COM4 +5V by hardware jumper pin9 depending on board jumper setting
Select Screen
Select Item
Change Option
F1 General Help
F10 Save and Exit
ESC Exit
v02.68 (C)Copyright 1985-2009, American Megatrends, Inc.

Jumper setup

Function		JP18
COM3	▲+5V	[1] 3 5 7 [2] 4 6 8
	+12V	1 [3] 5 7 2 [4] 6 8
COM4	+5V	1 3 [5] 7 2 4 [6] 8
	▲+12V	1 3 5 [7] 2 4 6 [8]

▲ = Manufacturer Default Setting

LCD ID Setting

Several configurations are applied to different sizes of panel. Please refer to the followings to complete relevant settings.

12.1"/15" Terminal

Physical Jumper Setting

Resolution	LVDS		Output Interface	JP8
	Bits	Channel		
800 x 600	24	Single	1st: LCD Panel 2nd: VGA port	1 [3 4] 5 [7 8] 2 6
1024 x 768	24	Single		1 [3 4] [5 6] [7 8] 2
1366 x 768	24	Single		1 3 [5 6] [7 8] 2 4
800 x 600	18	Single		[1 2] [3 4] 5 [7 8] 6
*800 x 600	18	Single		[1 2] [3 4] 5 7 6 8
1024 x 768	18	Single		[1 2] [3 4] [5 6] [7 8]

Remark: Panel ID#12 is specialized for Sharp 12.1” LQ121S1LG41/ LQ121S1LG42 panel

[1 2] Jumper open [1 2] Jumper short

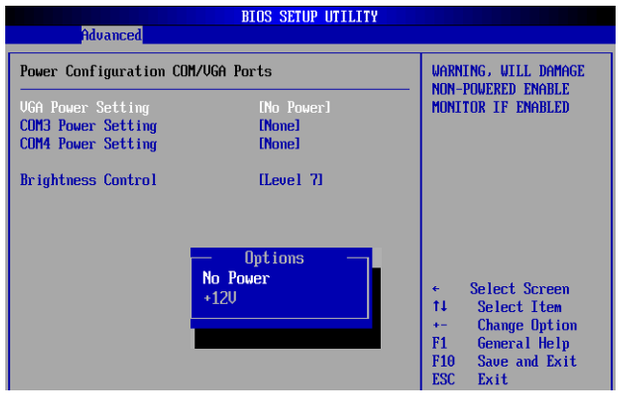
2nd VGA Power Setting

VGA port power must be on through BIOS/Utility for default is “No Power“.

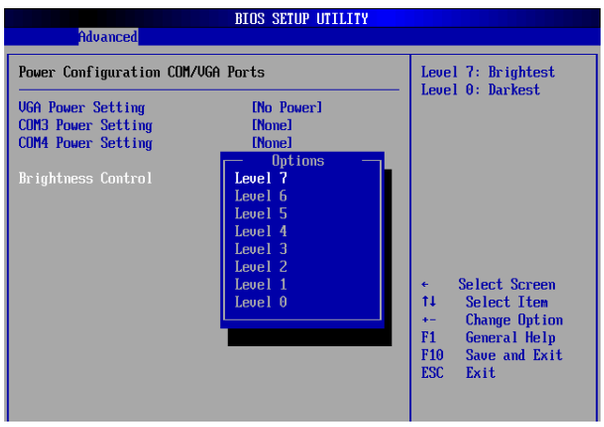
BIOS/Utility setup

1. Press <DEL> key to enter BIOS SETUP UTILITY when system boot up.
2. Find tab "Advanced".
3. Select "Power Configuration COM/VGA Ports" and press <Enter> to go to sub screen.

4. To switch on the power, select "+12V". Please save the change before exiting BIOS to avoid data lost.



5. To switch brightness level, select brightness control and choose level. Please save the change before exiting BIOS to avoid data lost.



Appendix: Drivers Installation

The shipping package includes a Driver CD in which you can find every individual driver and utility that enables you to install the drivers on the system.
Please insert the Driver CD into the drive and double click on the “index.htm” to select the models. You can refer to the drivers installation guide for each driver in the “Driver/Manual List”.